

# openSUSE LiveCD

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# What is a LiveCD?

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- ♦ boot from CD
- ♦ run Linux without installation
- ♦ all run-time data from CD



# Why LiveCD?

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- SUSE: demonstrate SUSE Linux with (nearly) no risk
- extensive rescue tool
- Knoppix: full Linux distro running from CD



# How exactly does it work?

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- ♦ boot kernel and initrd
- ♦ load storage modules and search for LiveCD
- ♦ master part resides compressed on CD
- ♦ mount it



# How exactly does it work?

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- ♦ copy data that must be writable into RAM (tmpfs)
- ♦ change root directory
- ♦ run usual startup scripts

Detailed guide



# Getting started

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- ♦ SUSE Linux installation media
- ♦ openSUSE Architecture tree
- ♦ LiveCD project on [forgerock.com](http://forgerock.com) (SVN only)
- ♦ read documentation
- ♦ install package



# Config/default.cn fig

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- ♦ build\_area
- ♦ RPM\_PATH
- ♦ MYSEL





# Package list

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- basic selections ('=')
- add ('+') or remove ('-') individual packages
- make list-of-RPMs
- dependencies are resolved automatically



# make in r/sbin

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- ♦ install packages
- ♦ apply patches (directory 'Fixes')
- ♦ add additional data (\*.tar.gz)



# make CDsetup

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- ♦ CDsetup = init
- ♦ needs kernel module info for building



# make outer.iso

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- ♦ build and compress initrd
- ♦ convert installed system to iso9660 image( 'inner.iso')
- ♦ compress resulting inner iso to cloop.img
- ♦ build final LiveCD iso with cloop.img, kernel, initrd



# Testing

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- ♦ add your own RPMs to RPM\_PATH
- ♦ LiveCD size estimate is only an approximation
- ♦ change build scripts to continue after small errors
- ♦ TEST PARTITION

Future



# Different filesystems

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- ♦ better compression (SquashFS)
- ♦ seamless merge of writable files (Unionfs)



# Save state

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- ♦ on USB storage
- ♦ on hard disk partition





# Esoteric

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- ♦ run over NFS( eg . to track filea ccesses)

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- Serves 81% of the Fortune 500
- Powers more than 3.8 million servers
- Supports in excess of 80 million users worldwide
- Supports of 27,000 channel partners, 40,000 ISVs and top industry alliance partners

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